

“ACDi has been a pleasure to work with on this project. Their level of support was above and beyond what you normally find. ACDi was instrumental in getting us through the entire UL process.”

**Richard,**  
Director of Engineering

## EMS SOLUTIONS BRING FUNCTIONAL PRODUCT TO MARKET

Our client's highly capable event monitoring device is for use in elevator and escalator systems. Not only does it monitor seismic events, but its added capability allows for the addition of remote and auxiliary sensors.

For seismic event monitoring this device uses sophisticated digital processing to trigger on events in accordance to the ASCE 25-97 or ASME A17.1 standards, or alternatively to a user-defined profile. Once a seismic event has been detected, the device triggers both latching and non-latching relays that can be interfaced to the elevator or escalator controller. Normally opened and normally closed relay thermals are provided for additional flexibility.

The device can interface with a remote seismic sensor as well as a remote auxiliary sensor. The remote seismic sensor allows for installation flexibility in challenging environments such as escalator enclosures. The auxiliary sensor input allows for the addition of numerous digital or analog sensors such as wind sensor, water sensor, etc.

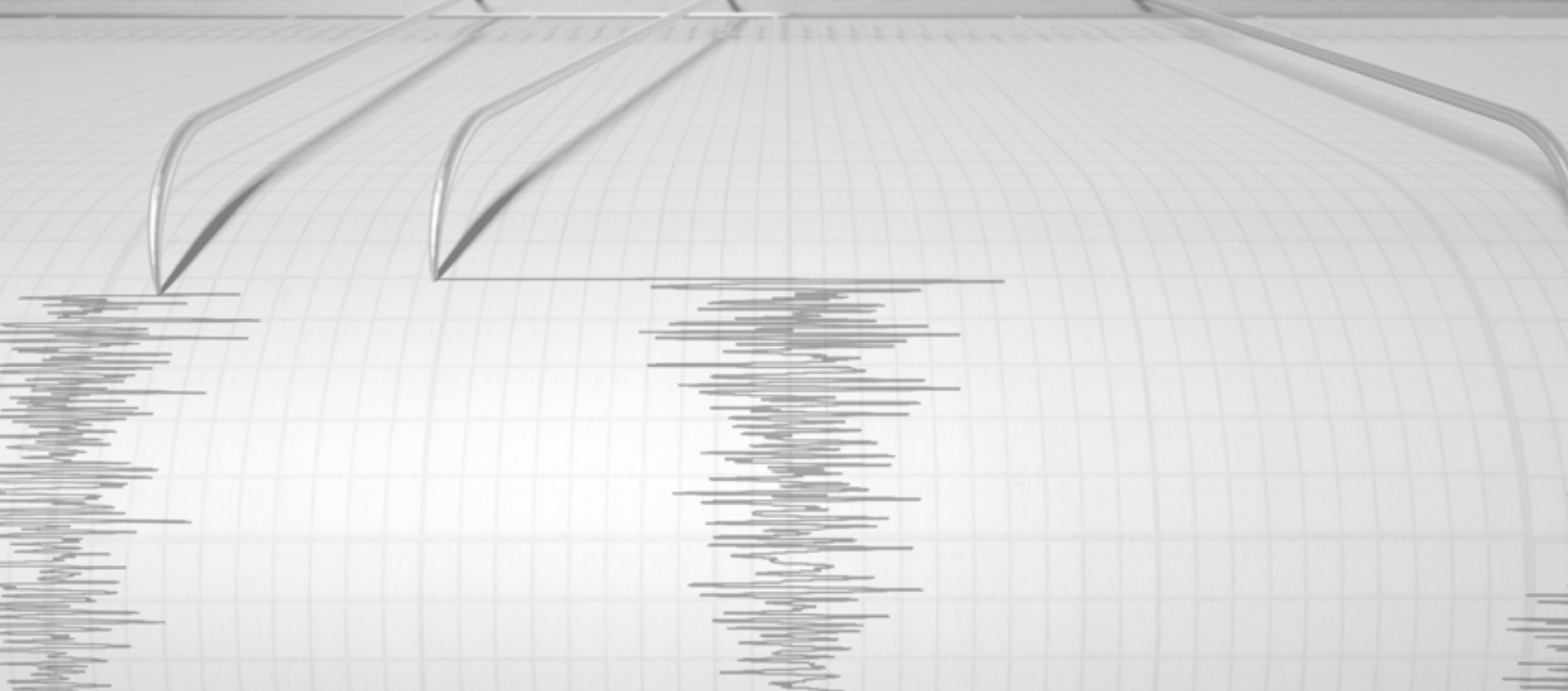
The device is designed with numerous other features that offer flexibility and reliability. These include a 24-hour battery backup, DC or AC operation, extensive built-in test with remote monitoring, and menu driven interface.

### KEY FEATURES

- Dual internal tri-axis accelerometer technology for accuracy and reliability
- Advanced digital signal processing algorithms frequency resolution
- Preset ASCE 25-97 and ASME A17.1 profiles
- Two user-defined profiles with up to five frequency bands each
- Ability to support an external seismic sensor
- 24-hour battery backup
- Ability to support an auxiliary sensor for measurements of other events
- Both latching and non-latching alarm relays
- Trouble and auxiliary relays
- Remote reset capabilities
- Extensive built-in test
- Remote activation capabilities
- 12-24VDC or 100-240VAC operation
- Optional RS-232 and USB interface

### FUNCTIONS

- Detect a seismic event and trip a latching and non-latching relay
- Detect an event from an auxiliary relay
- Detect an internal failure and trip a latching relay



## WHY ACDi?

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For the development of the event monitoring device ACDi was able to provide end-to-end value added services to the customer. These included:

### REQUIREMENTS DEFINITION

ACDi worked with the customer to collect and document requirements prior to beginning product design. This ensured an efficient and effective development process.

### ENGINEERING DESIGN

ACDi and its partners were comprised of a professional engineering team that was capable of providing mechanical, electrical, software, and manufacturing engineering expertise. The team worked closely with the client at all phases of the program to make sure the product met expectations.

### PROTOTYPE FABRICATION

ACDi provided small-volume prototypes for test and verification. These prototypes also aided in quickly obtaining the necessary regulatory compliance.

### PRODUCTION

ACDi and the client worked together to meet production goals including cost, volume, and schedule. ACDi offered expertise in material procurement, production flow, and automated test.

### INTELLECTUAL PROPERTY

ACDi provided the customer with configuration-managed documentation that ensures the customer will be able to maintain and manage the product.

### TEST AND QUALITY

ACDi tested all production units for functionality prior to shipment using custom test fixtures to ensure reliability.